

App. No. 10/762,449

Reply to Office action of December 14, 2004

**REMARKS/ARGUMENTS****A. Summary of the Amendment**

This is a full and timely response to the non-final Office Action dated December 14, 2004. Reexamination and reconsideration are courteously requested.

By way of the present amendment, claims 36 and 38 are amended. Further, claim 40 is canceled. Thus, claims 36 to 39 remain pending for the Examiner's consideration, with claims 36 and 38 being independent claims.

The specification is also amended to correct minor editorial problems.

**B. Allowable Subject Matter**

The examiner has acknowledged that claim 39 is directed to allowable subject matter. Applicants thank the Examiner for a thorough examination of this and the other pending claims.

**C. Objections to the Specification and Claims**

The disclosure is objected to for including various informalities. Each of these objections is attended to in the present amendments to the specification. It is therefore requested that the objections be withdrawn.

Claim 40 is objected to for various informalities. Claim 40 is canceled by way of the present amendment.

App. No. 10/762,449

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D. Rejections Under 35 U.S.C. § 102

Claims 36 to 38, and 40 are rejected as being anticipated by U.S. Patent No. 5,555,481 ("Rock"). These rejections are respectfully traversed in view of the present amendment.

Claim 36 recites executable method steps that include obtaining first curve data defining a structural layer that has side surfaces; and generating second curve data defining a second layer area that, when filled with a material, has at least one side surface that has an overall convex shape and abuts at least a portion of the structural layer side surfaces. Rock discloses in FIG. 3 (corrected figures) structural layers 1, along with second layer areas 2 that, when filled with a material, abut the structural layers 1. However, Rock fails to teach or suggest that the second layer areas 2 have overall convex side surfaces. For this reason, the rejections of claims 36 and 37 should be overcome.

Claim 38 recites executable method steps that include obtaining first layer data sets representing a) a layer area to be filled with a first material, along with b) first support layer areas underneath the layer area, also to be filled with the first material; and generating second layer data sets representing c) second support layer areas underneath an unsupported portion of the layer area, the second support layer areas to be filled with a second material. Claim 38 further recites that the layer area and the first support layer areas, when filled with the first material, define a void volume underneath the unsupported portion of the layer area, and that the second support layer areas, when filled with the second material, define a support structure inside the void volume, the support structure having a support structure volume that is substantially less than the void volume.

Rock discloses in FIG. 3 (corrected figures) that a first material 1 includes a layer area (top layer made from material 1) having an unsupported portion (supported in FIG. 3 with second material 2). The first material 1 further includes support layer areas underneath the unsupported layer area. Rock also discloses a second material 2 that includes second support layer areas underneath the unsupported layer area. The layer area and support layers made from material 1 define a void volume beneath the unsupported portion of the layer area, but the second material 2 defines a support structure that has a structural volume that is the same as the

App. No. 10/762,449

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void volume; the support structure entirely fills the void volume. Since Rock fails to teach or suggest that the support structure volume is substantially less than the void volume, it is respectfully requested that the rejection of claim 38 be withdrawn.

#### E. Conclusion

In view of Applicant's amendments and remarks, it is respectfully submitted that Examiner's objections and rejections have been overcome. Accordingly, Applicants respectfully submit that the application is now in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants attorneys at the below-listed telephone number.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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Dated: FEB. 28, 2005

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